

Latex Allergy Management for Healthcare Professionals

Gloves containing natural rubber latex (NRL), a type of rubber derived from the milky sap of the *Hevea brasiliensis* tree, provide excellent protection against the transmission of infectious agents and are an integral part of healthcare practice. NRL is found in many healthcare and consumer products. Most people are regularly exposed to NRL as it is found in thousands of everyday items.

In the healthcare setting, NRL gloves have been associated with latex allergy (Type I reaction), and other adverse skin reactions such as; allergic contact dermatitis (Type IV reactions/Chemical Allergy) and irritant contact dermatitis (non-allergic contact dermatitis), with the latter due to the use of soaps, hand scrubs and abrasive hand towels. Fortunately, with the advent of improved and innovative technologies that incorporate superior modern manufacturing processes, low allergen NRL powder-free gloves and non-latex synthetic gloves made of nitrile, neoprene and polyisoprene, the incidence of Type I latex reactions has declined.¹

Population at Risk

Although the majority of healthcare workers (HCWs) and general population are not at risk of NRL allergy, certain risk factors may contribute to the incidence and risk of developing a Latex Type I allergic reaction:

- Increased exposure to NRL
- Spina Bifida
- Major or multiple surgeries as an infant or a child
- Atopy

- Allergy to food, including bananas, avocados, kiwi, chestnut, apple, potato, tomato and papaya

NRL GLOVES HAVE BEEN ASSOCIATED WITH LATEX ALLERGY (TYPE I REACTION), AND OTHER ADVERSE SKIN REACTIONS SUCH AS; ALLERGIC CONTACT DERMATITIS (TYPE IV REACTIONS/CHEMICAL ALLERGY) AND IRRITANT CONTACT DERMATITIS (NON-ALLERGIC CONTACT DERMATITIS)

Immediate Latex Type I Response

A Type I response is a reaction to residual proteins found in latex. While there are more than 250 different types of latex proteins, approximately 20% are allergenic. The prevalence of latex allergy in healthcare workers ranges from 2% to 15%.²

A type I allergic response is mediated by latex specific IgE antibodies and the allergic reaction is immediate, typically occurring 5 to 30 minutes after initial contact. The symptoms are commonly:

Cutaneous Effects:

- Itchy rash
- Contact urticaria- localized or generalized

Systemic Effects:

- Angioedema
- Rhinoconjunctivitis and conjunctivitis
- Asthma
- In rare cases, symptoms of anaphylaxis can occur

Treatment

If you develop any symptoms, consult with your individual institution for a referral to a qualified physician experienced in latex allergy for specific recommendations, policies, diagnosis and treatment related to Latex Type I allergy. Become aware of latex-containing products and avoid contact with them. Wearing a medic alert bracelet if the latex allergy is life threatening is also recommended.

Healthcare workers can minimize latex sensitization by choosing powder-free gloves with low allergenic protein content if continuing to use latex gloves. Establishing NRL-free or powder-free policies and procedures is an important preventative measure to reduce the risk of an adverse reaction in both latex-sensitive patients and healthcare workers. As well as causing other complications, glove powder is a possible carrier of latex proteins and makes it airborne which increases sensitization, and as such powdered NRL gloves should be eliminated from the healthcare setting .³

References

1. Allmers H. Current State of the Art in Natural Rubber Latex Allergy Prevention. Business Briefing: Hospital Engineering & Facilities Management 2005:1-4
2. Katelaris C. Latex Reactions: Allergic and Non-Allergic Hypersensitivity. World Allergy Organization.
3. Allmers H. The disappearance of NRL-allergy in Germany and Europe. MREPC Seminars. Madrid and Rome 2010.